Amendment to the Claims

38. (previously presented) An apparatus for detecting an environmental condition, comprising:

a housing;

a measurement mass wafer coupled to the housing, the measurement mass wafer being responsive to the environmental condition;

at least one cap wafer coupled to the housing;

a plurality of bumpers geometrically disposed on the cap wafer for providing the sensor overshock protection; and

at least one electrode coupled to the measurement mass wafer,

wherein the at least one electrode is adapted to reduce stiction during operation.

39. (previously presented) The apparatus of claim 38 wherein the environmental condition is acceleration.

40. (previously presented) The apparatus of claim 38, wherein the at least one cap wafer further comprises a top cap wafer and a bottom cap wafer that form a cavity, the measurement mass wafer further comprising a measurement mass housed at least partially within the cavity.

41. (previously presented) The apparatus of claim 40, wherein the top cap wafer includes a press frame recess.

42. (previously presented) The apparatus of claim 40, wherein the bottom cap wafer includes a press frame recess.

43. (previously presented) The apparatus of claim 40, wherein the measurement mass wafer further includes a passage for venting air from the cavity in the housing.

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44. (currently amended) The apparatus of claim ~~40~~ 43, wherein the passage comprises an approximately V-shaped groove in the measurement mass.

45. (previously presented) The apparatus of claim 38, wherein a portion of the at least one

electrode includes a stiction-reducing pattern.

46. (previously presented) The apparatus of claim 45, wherein the electrode pattern includes one or more cavities for reducing stiction between the plurality of bumpers and the at least one electrode.

47. (previously presented) The apparatus of claim 45, wherein the electrode pattern includes one or more reduced-thickness recesses for reducing stiction between the plurality of bumpers and the at least one electrode

48. (previously presented) The apparatus of claim 45, wherein the electrode portion pattern is selected from a group consisting of

i) a plurality of squares;

ii) a plurality of circles;

iii) a plurality of concentric circles;

iv) a plurality of rectangles; and

v) a series of geometrically arranged pie-shaped segments.

49. (previously presented) The apparatus of claim 38, wherein the plurality of bumpers are shaped as at least one of circles and ridges.

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68. (previously presented) A method for protecting a sensor during operation, the sensor comprising a housing, a measurement mass wafer coupled to the housing for detecting an environmental condition, at least one cap wafer coupled to the housing and at least one electrode coupled to the measurement mass wafer, the method comprising:

providing overshock protection to the sensor using a plurality of bumpers geometrically disposed on the cap wafer; and

adapting the at least one electrode to reduce stiction during sensor operation.

69. (previously presented) The method of claim 68, wherein the environmental condition is

acceleration.

70. (previously presented) The method of claim 68 further comprising using a stiction-reducing pattern on a portion of the at least one electrode to reduce stiction between the at least one electrode and the bumpers.

71. (previously presented) The method of claim 70, wherein the electrode pattern includes one or more cavities for reducing stiction between the plurality of bumpers and the at least one electrode.

72. (previously presented) The method of claim 70, wherein the electrode pattern includes one or more reduced-thickness recesses for reducing stiction between the plurality of bumpers and the at least one electrode

73. (previously presented) The method of claim 70, wherein the electrode pattern is selected from a group consisting of

i) a plurality of squares;

ii) a plurality of circles;

iii) a plurality of concentric circles;

iv) a plurality of rectangles; and

v) a series of geometrically arranged pie-shaped segments.

74. (previously presented) The method of claim 68, wherein the plurality of bumpers are shaped as at least one of circles and ridges for reducing stiction between the bumpers and the at least one electrode.

75. (previously presented) An apparatus for detecting an environmental condition, comprising:

a housing;

a measurement mass wafer coupled to the housing, the measurement mass wafer being responsive to the environmental condition;

at least one cap wafer coupled to the housing;

one or more bumpers disposed on the cap wafer for providing the sensor overshock protection; and

one or more electrodes coupled to the measurement mass wafer,

wherein the one or more bumpers and the one or more electrodes are each patterned to reduce stiction during operation.

76. (previously presented) An apparatus for detecting an environmental condition, comprising:

a housing;

a measurement mass wafer coupled to the housing, the measurement mass wafer being responsive to the environmental condition;

at least one cap wafer coupled to the housing;

one or more bumpers disposed on the cap wafer for providing the sensor overshock protection; and

one or more electrodes coupled to the measurement mass wafer,

wherein the one or more bumpers are patterned as circles or ridges to reduce stiction during operation.

77. (new) The apparatus of claim 38, wherein the at least one cap wafer includes a bond ring and wherein the at least one electrode has a thickness smaller than a thickness of the bond ring, the difference in thickness between the electrode and the bond ring reducing stiction between the plurality of bumpers and the electrode during operation.

78. (new) The apparatus of claim 38, wherein the at least one electrode includes an electrode pattern formed by etching a surface of the measurement mass wafer, applying a metal layer on the etched surface, and molding the metal layer to form a stiction-reducing electrode pattern.

79. (new) The method of claim 68,wherein the at least one cap wafer includes a bond ring and wherein adapting the at least one electrode to reduce stiction during sensor operation includes reducing a thickness of the at least one electrode to be smaller than a thickness of the bond ring, the difference in thickness between the electrode and the

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bond ring reducing stiction between the plurality of bumpers and the electrode during operation.

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80. (new) The method of claim 68, wherein adapting the at least one electrode to reduce stiction during sensor operation further comprises etching a surface of the measurement mass wafer, applying a metal layer on the etched surface, and molding the metal layer to form a stiction-reducing electrode pattern.